

Written Opinion of the Inter-  
national Searching Authority

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Appended Sheet

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Re Point V.

1 Reference is made to the following documents:

D1: WO 91/19836 A (HENKEL CORPORATION) Dezember 26, 1991

D2: US-A-3 449 222 (DENNIS B. FREEMAN ET AL) Juni 10,  
1969

D3: WO 00/15879 A (HENKEL CORPORATION; KOBAYASHI,  
NAOYUKI; MORIYAMA, ATSUSHI) März 23, 2000

2 Background Information

Document D1 discloses (the references in parentheses relate to this document): a method for phosphating metal layers, and metal layers having a porous zinc phosphate layer deposited thereon, by electrolytic depositing from acid aqueous solutions which contain at least zinc ions and phosphate ions, while simultaneously applying direct current, simultaneously with the depositing of the phosphating layer, an electrolytic deposition taking place of zinc in the same electrolyte and the current density being greater than  $-5 \text{ A/dm}^2$  (page 4, lines 33-35, table 1, example F and 1).

Document D2 discloses (the references in parentheses relate to this document): a method for phosphating metal layers, and metal layers having a porous zinc phosphate layer thereon, by electrolytic deposition from acid aqueous solutions (Claim 1, column 5, lines 8-15).

Document D3 discloses (the references in parentheses relate to this document): a method for phosphating metal layers, and

metal layers having a porous zinc phosphate layer deposited thereon, by an electrolytic pulsed deposition from acid aqueous solutions, and the metal ions of the divalent metal M being supplied by anodic dissolution of the electrolyte (Claims 2 and 3, page 9, lines 9-12, Table 3, examples E10 and E 14).

### 3 INDEPENDENT CLAIMS 1 AND 20

Therefore, document D1 discloses all the features mentioned in independent Claims 1 and 20 in combination with each other. Therefore, the subject matter of this claim is not novel (Article 33 (2) PCT).

Document D2 also discloses all the features mentioned in independent Claims 1 and 20 in combination with each other. Therefore, the subject matter of this claim is not novel (Article 33 (2) PCT).

Similarly, document D3 discloses all the features mentioned in independent Claims 1 and 20 in combination with each other. Therefore, the subject matter of these claims is not novel (Article 33 (2) PCT).

The same reasoning applies correspondingly also to the other cited documents named in the International Search Report, see the text locations given in the Search Report.

### DEPENDENT CLAIMS 2-19

Claims 2 through 19 do not include any features that, in combination with the features of any claim to which they

relate, fulfill the requirements of the PCT with regard to novelty and inventive step; see documents D1 - D3 and other documents indicated in the Search Report, and the corresponding text locations given in the Search Report.

**Re Point VII.**

Claim 1 is limited to zinc, whereas Claim 5 relates to zinc alloys. Claim 5 does not include all the features of independent Claim 1, and is therefore wrongly formulated as a claim depending on the latter (Rule 6.4 PCT).

**Re Section VIII.**

It emerges from the specification on page 5, lines 23-26, that the following feature is essential for the definition of the invention: that a "high zinc bath is used, whose zinc content is more than 5 g/l".

Since independent Claim 1 does not include this feature, it does not meet the requirement of Article 6 PCT in conjunction with Rule 6.3 b) PCT, that each independent claim must contain all of the technical features essential to the definition of the invention.

The use of the designation „in particular" and "preferably" in Claims 3, 4 and 10 should be avoided, because it represents ambiguity with regard to the range of protection that is being sought. The term "approximately" used in Claims 10 through 19 is vague and unclear, and leaves the reader in the dark about the meaning of the relevant technical feature. As a result,

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the definition of the subject matter of these claims is not  
clear (Article 6 PCT).